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RESOURCE UTILIZATION AMONG INPATIENTS WITH RHEUMATOID ARTHRITIS—AN ANALYSIS OF 2004 HEALTH CARE COST AND UTILIZATION PROJECT DATAParekh HH¹, Kamal KM², Smith MJ³, Skomo ML²¹3 Innovus, Medford, MA, USA, ²Duquesne University, Pittsburgh, PA, USA, ³West Virginia University, Morgantown, WV, USA

OBJECTIVE: To estimate the length of stay (LOS) and total charges among inpatients with rheumatoid arthritis (RA) based on patient- and hospital- related characteristics. **METHODS:** A retrospective analysis was conducted using a 20% sample from the 2004 Nationwide Inpatient Sample (NIS) of the Healthcare Cost and Utilization Project (HCUP) data. NIS is an all-payer inpatient care database that contains hospital discharge data from a national sample of more than 1,000 hospitals. The 2004 NIS of the HCUP data was used to extract individuals with RA (primary diagnosis using ICD-9 code 714.0). Descriptive analysis was conducted to examine the differences in RA-related LOS and total charges by patient-related (age, race, gender, payer status, patient location, and median household income) and hospital-related (bed-size, geographic region, location, and teaching status) characteristics. Multiple regression was conducted to identify patient- and hospital-related predictors of LOS and charges among inpatients with RA. **RESULTS:** A total of 655 individuals with RA were extracted. The mean age was 61.92 years and the patients were predominantly female (79.3%) and white (68.8%). In addition, around 50% of these patients were located in large metro areas. A majority of hospitalizations occurred in the Southern region (34.8%) of the U.S in hospitals that had a large bed-size (57.3%). The mean LOS for patients with RA was 4.24 days and mean total charges were \$25,852. The payer variable 'private insurance' was found to be a predictor of LOS while the predictors for charges included race (Hispanics), age (61–70 years), and geographic location (Western region). **CONCLUSION:** Inpatients LOS and charges are high in RA. Successful interventions that take into account important RA-related patient and hospital characteristics could result in improved health outcomes and substantial cost savings in this population.

PMS25

ASSOCIATION BETWEEN OUT-OF-POCKET EXPENSES AND CLINICAL OUTCOMES, AND QUALITY OF LIFE IN PATIENTS WITH RHEUMATOID ARTHRITISTang B¹, Rahman MI¹, Annunziata K², Thompson H¹, Naim A¹, Freedman D²¹Centocor, Inc, Horsham, PA, USA, ²Consumer Health Sciences, Princeton, NJ, USA

OBJECTIVE: To evaluate the relationship between out-of-pocket (OOP) expenses for medication and clinical outcomes in rheumatoid arthritis (RA) patients. **METHODS:** A 2006 Rheumatoid Arthritis Patient Survey data (wave 7) was analyzed. Adult RA patients completed an online questionnaire regarding their RA disease status, signs and symptoms, quality of life as measured by physical (PCS) mental component scores (MCS) of Short Form-8 (SF-8), and work productivity loss measured by Work Productivity and Activity Impairment (WPAI). Comparisons were made between two groups: patients reporting per-month OOP \geq \$100 and OOP < \$100. Multivariate analyses were performed to control for confounding factors, including age, gender, duration and severity of RA, signs, and symptoms. **RESULTS:** Of the 2000 respondents, 77.4% were female and the average age was 51.6 years. The mean per-month OOP was \$95.75 for all medications. Compared with patients reporting <\$0 OOP (N = 1376, 68.8%), the OOP \geq \$100 group (N = 624, 31.2%) had significantly

worse patient-reported clinical measures and outcomes (all P-values <0.0001), including pain scores (6.20 vs. 5.39), morning stiffness (6.32 vs. 5.53), fatigue (6.36 vs. 5.11), PCS (34.66 vs. 38.37), MCS (41.21 vs. 43.79), work productivity loss of WPAI (35.43% vs. 28.14%). After adjusting the confounding factors (age, gender, % of prescription by rheumatologist, severity and years with RA), higher OOP is positively related to pain, morning stiffness, fatigue, WPAI and negatively related to PCS score. **CONCLUSION:** In addition to safety and efficacy, cost or OOP is an important factor in the decision of the RA treatment. This study indicates that higher OOP is negatively related to the clinical outcomes (including signs and symptoms, quality of life and work and productivity loss). It is recommended that more research be conducted to evaluate the impact of co-payments and OOP on the economic, clinical, and humanistic outcomes in the treatment of RA.

PMS26

TRENDS IN HOSPITALIZATIONS AMONG INPATIENTS WITH RHEUMATOID ARTHRITIS—AN ANALYSIS OF 2002–2004 HEALTH CARE COST AND UTILIZATION PROJECT DATAParekh HH¹, Kamal KM², Skomo ML², Smith MJ³¹3 Innovus, Medford, MA, USA, ²Duquesne University, Pittsburgh, PA, USA, ³West Virginia University, Morgantown, WV, USA

OBJECTIVE: To investigate the trends in length of stay (LOS), total charges, and principal procedures for rheumatoid arthritis-related (RA) hospitalizations for 2002–2004. **METHODS:** A retrospective analysis was conducted using a 20% sample from 2004 Nationwide Inpatient Sample (NIS) of the Healthcare Cost and Utilization Project (HCUP) data. NIS is an all-payer inpatient care database that contains hospital discharge data from a national sample of more than 1000 hospitals. Inpatient data from 2002 through 2004 were obtained from the NIS datasets. Individuals with RA (primary diagnosis using ICD-9 code 714.0) were extracted from the datasets. A descriptive analysis was conducted to assess the trends in LOS, total charges, and principal procedures. **RESULTS:** A total number of 744 hospitalized RA cases were observed in 2002, 612 cases in 2003 and 655 cases in 2004. LOS as well as total charges showed an increasing trend from 2002 through 2004. The mean LOS was 3.99 days in 2002, 4.22 days in 2003, and 4.24 days in 2004; whereas the mean total charges were \$19,712 in 2002, \$24,724 in 2003, and \$25,852 in 2004. Around 72%, 74%, and 73.4% patients had undergone some surgical procedures in years 2002, 2003 and 2004, respectively. Total knee replacement (TKR) and total hip replacement (THR) comprised the procedures conducted most often for all three years. TKR was conducted on 18.07% patients in 2002, 18.64% in 2003 and 21.29% in 2004. **CONCLUSION:** There is a dearth of data on trends in LOS and total charges for RA patients in the literature. Even though the number of hospitalizations for RA is decreasing, there is an increasing trend in the average LOS and total charges. The increase in surgical procedures over the time period could be a contributing factor to the longer LOS and higher total charges.

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DOES THE FUNDING SOURCE INFLUENCE THE RESULTS IN ECONOMIC EVALUATIONS? A CASE- STUDY IN BISPHOSPHONATES FOR THE TREATMENT OF OSTEOPOROSISFleurence RL¹, Spackman E², Hollenbeak C³¹United BioSource Corporation Health Analytics Group, Bethesda, MD, USA, ²United BioSource Corporation Health Analytics Group, Seattle, WA, USA, ³Penn State College of Medicine, Hershey, PA, USA

OBJECTIVE: Research sponsored by the pharmaceutical industry is often assumed to be more likely to report favorable cost-

effectiveness results. The objective of this study was to determine whether there was a relationship between the source of funding and the reporting of positive results. **METHODS:** We conducted a systematic review of the literature to identify economic evaluations of bisphosphonates for the treatment of osteoporosis. We extracted the source of funding, region of study, the journal name and impact factor and all reported incremental cost effectiveness ratios (ICERs). We identified which ICERs were under the thresholds of \$20,000, \$50,000 and \$100,000. A quality score between 0 and 7 was also given to each of the studies. We used generalized estimating equations (GEE) for the analysis. **RESULTS:** The systematic review yielded 532 potential abstracts: Seventeen met our final eligibility criteria, 531 ICERs were analyzed, and ten studies (59%) were funded by industry. There was no significant difference between industry and non-industry funded studies reporting ICERs below the thresholds of \$20,000 and \$50,000. However industry sponsored studies were more likely to report ICERs below \$100,000 [OR = 4.69, 95%CI (1.77–12.43)]. Studies of higher methodological quality (higher than 4.5) were less likely to report ICERs below \$20,000 and \$50,000 than studies of lower methodological quality (score under 4). Methodological quality was not significantly different between studies reporting ICERs under \$100,000. **CONCLUSIONS:** Our study shows that funding source (industry vs. non-industry) did not significantly affect the reporting of ICERs below \$20,000 and \$50,000 thresholds. Methodological quality might be a more significant factor than source of funding in differentiating which studies are likely to report favorable ICERs, with the higher quality studies significantly less likely to report ICERs below \$20,000/QALY and \$50,000/QALY.

PMS28

REAL WORLD COSTS AND DOSING PATTERNS OF ABATACEPT AND INFlixIMAB FOR THE TREATMENT OF RHEUMATOID ARTHRITIS

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OBJECTIVE: To determine the annual drug and administration costs and dosage patterns for patients with rheumatoid arthritis (RA) treated with infliximab or abatacept from a managed care perspective. **METHODS:** A retrospective analysis of medical claims was performed using the PharMetrics claims database. Patients with RA were identified from January 1, 2003–December 31, 2005 for those prescribed infliximab and February 1, 2006–December 31, 2006 for those prescribed abatacept as first or subsequent biologic treatment. Patients were followed until medication switch, discontinuation, or end of study period. Primary outcomes of interest were annual drug and administration costs and dose escalation (increase in dose, dosing frequency or both). Patients' weight information required to calculate dose were unavailable, therefore paid amounts were used as proxy for dose. **RESULTS:** From first to last infusion, patients receiving infliximab (n = 1913) as first or subsequent biologic experienced an average dose increase of 17% and 39%, respectively. A total of 58% and 73% patients prescribed infliximab as first or second-plus biologic experienced dose escalation, respectively. For patients receiving abatacept (n = 184) as first or subsequent biologic, dose increase averaged 1.2% and 6.5%, respectively (no increase in number of vials for either). The dosing interval for patients receiving abatacept followed the recommended dosing regimen. Patients treated with infliximab experienced an increase in dosing frequency, averaging 49 days earlier in treatment (from 4th to 14th infusion) and 33 days later in treatment (15th to last infusion). The estimated annual drug plus infusion administration cost of first and subsequent biologic therapy was \$13,354

and \$14,465 for abatacept and \$16,608 and \$23,913 for infliximab, respectively. **CONCLUSION:** Patients treated with infliximab experienced an increase in dosage and/or dosing frequency, resulting in an increase in real world treatment costs. Patients treated with abatacept showed no considerable increase in dose or dosing frequency from first to last infusion.

PMS29

BAYESIAN COST-EFFECTIVENESS ANALYSIS OF TREATMENT OF ANKYLOSING SPONDYLITIS

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OBJECTIVE: To evaluate the cost-effectiveness of etoricoxib (90 mg), celecoxib (200/400 mg), and the non-selective NSAIDs naproxen (1000 mg) and diclofenac (150 mg) in the initial treatment of ankylosing spondylitis (AS) in the UK. **METHODS:** A Bayesian cost-effectiveness model was developed to estimate the costs and benefits associated with initiating AS treatment with etoricoxib, celecoxib, diclofenac, or naproxen. Efficacy, safety and medical resource and cost data were obtained from the literature. With mixed treatment comparison meta-analysis the obtained efficacy estimates were synthesized. Treatment benefit and degree of disease activity, as reflected with BASFI and BASDAI scores, were related to quality adjusted life years (QALYs) and disability related costs. Other cost outcomes related to drug acquisition, gastrointestinal and cardiovascular safety were taken into consideration. Uncertainty in the source data was translated into uncertainty in cost-effectiveness estimates and therefore decision uncertainty. **RESULTS:** There was more than 98% a probability that etoricoxib results in greater QALYs than the other interventions. Over a 30-year time horizon, etoricoxib is associated with about 0.5 more QALYs than the other interventions. At 2 years there is a 77% probability that etoricoxib shows the lowest cost. This increases to >99% at 30 years. At 30 years etoricoxib is expected to save ≤19,460 relative to celecoxib (200/400 mg) and ≤14,140 relative to naproxen and diclofenac. For a willingness-to-pay ceiling ratio of ≤20,000 per QALY there is a >97% probability that etoricoxib is the most-cost-effective treatment. Additional analysis with different assumptions, including celecoxib 200 mg, and ignoring cost-offsets associated with AS disability, supported these findings. **CONCLUSION:** This economic evaluation demonstrated that etoricoxib is the most cost-effective NSAID treatment for AS patients in the UK.

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EFFECTS OF 12-HOUR, EXTENDED-RELEASE HYDROCODONE/ACETAMINOPHEN ON PAIN-RELATED WORK PRODUCTIVITY: A SUBANALYSIS FROM A 56-WEEK OPEN-LABEL STUDY

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OBJECTIVE: Chronic pain conditions, such as osteoarthritis (OA) and mechanical chronic low back pain (CLBP), among active workers cost employers ~\$61.2 billion/yr in lost productive time, which includes both reduced performance while at work and days of work missed (absenteeism). An analysis of lost productivity time from a 56-week, open-label study was con-